

REMARKS

The Office Action dated February 21, 2006 has been received and carefully considered. The following remarks are being submitted as a full and complete response to the Office Action. No amendments to the claims have been made with this response.

Claims 1, 3, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lear (U.S. Patent No. 2,403,092).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros., Inc. v. Union Oil Co. of Cal., 814 F.2d 628, 631 (Fed. Cir. 1987).

Lear does not disclose the claimed element of "a piston" as set forth in pending claim 1. In particular, the cited reference does not disclose "a piston, which is slidably displaceable along an inner wall surface of said tube member" and wherein the piston explicitly is set forth and claimed as a separate element functionally distinguishable from the feed screw shaft, which "is connected to an end of said feed screw shaft."

Referring to the Office Action, the Examiner contends that the claimed piston is met by the enclosed end of the threaded shaft S shown in Lear. (See, page 3, lines 5-6, and marked-up figure on page 4 of the final Office Action.)

"Words in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning." Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1299, 53 USPQ2d 1065, 1067 (Fed. Cir. 1999). See also, MPEP § 2111.01.

The plain and ordinary meaning of the term "piston" as understood by persons skilled in the art to which the invention pertains is exemplified by any of the following common definitions:

piston: a solid cylinder or disk that fits snugly into a larger cylinder and moves under fluid pressure, as in a reciprocating engine, or displaces or compresses fluids, as in pumps and compressors. *The American Heritage® Dictionary of the English Language, Fourth Edition, Copyright © 2000 by Houghton Mifflin Company.*

piston: a sliding piece moved by or moving against fluid pressure which usually consists of a short cylinder fitting within a cylindrical vessel along which it moves back and forth. *Merriam-Webster Online Dictionary* <http://www.m-w.com/dictionary/piston>

In general, a piston is a sliding plug that fits closely inside the bore of a cylinder. <http://en.wikipedia.org/wiki/Piston>

A piston is a sliding piece moved by or moving against fluid pressure. It usually consists of a short cylinder that fits inside a cylindrical tube or chamber in which it moves back and forth. http://www.newton.mec.edu/brown/te/MODULES/pneumatics_Glossary.html

Clear in all of the above definitions is that a "piston" is a sliding member that fits closely or snugly inside the bore of a cylinder body, and which undergoes sliding movement against the inner wall of the cylinder body under the influence of fluid pressure supplied to the cylinder body.

By contrast, in Lear, the end of the threaded shaft S is not in contact with the inner wall of the tube (housing H), and hence, the end of the shaft S does not make *sliding contact* against the inner wall of the tube H. Moreover, the end of the shaft S is not influenced by fluid pressure supplied to the cylinder tube H. Therefore, it is respectfully submitted that the end of the shaft S cannot properly be considered a "piston"

in light of the ordinary meaning given to the term in the relevant art.

Further, if the ordinary meaning of the term "piston" were not enough to render the interpretation in the Office Action improper, claim 1 explicitly requires "a piston, which is slidably displaceable along an inner wall surface of said tube member." In Lear, the end of the threaded shaft S is not even in contact with the tube H and clearly does not slide along the inner wall surface of the tube H, as specifically required by pending claim 1. In fact, there is no element shown or disclosed in Lear that slides along the inner wall surface of the tube H.

Finally, in the claimed invention, the "feed screw shaft" and the "piston" are set forth as separate and distinguishable elements providing different, albeit interrelated functions. However, in the rejection, the Examiner seems to be equating the threaded shaft S of Lear with both the claimed "feed screw shaft" and the claimed "piston." It is respectfully submitted, however, that a single integral element in the cited reference cannot be responsive to both claimed features of the "feed screw shaft" and the "piston." Stated otherwise, a separately claimed piston, which is explicitly claimed as being "connected to" the end of the feed screw shaft, cannot properly be met merely by the end portion of a unitary threaded shaft S in the cited reference, with no other member actually connected to the end of the shaft.

Claims 4 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lear. Further, claim 10 was rejected

under 35 U.S.C. § 103(a) as being unpatentable over Lear in view of Scavini.

Concerning the rejections to the other dependent claims, based on the applicant's remarks pertaining to claim 1, it is respectfully submitted that all of the dependent claims are allowable at least for the same reasons discussed above. As indicated above, Lear does not anticipate claim 1, and the Examiner's arguments with respect to obviousness along with the secondary reference offer nothing to make up for the deficiencies of the primary reference.

The applicant gratefully acknowledges the indication of allowable subject matter on page 7 of the Office Action with respect to dependent claims 5 and 6. However, since the features of pending claim 1 are not properly anticipated by the cited prior art, the applicant respectfully contends that all claims of the present application are currently in condition for allowance.

For the foregoing reasons, it is respectfully submitted that the claimed invention is not anticipated and would not have been obvious to a person skilled in the art at the time the present invention was made. Reconsideration and withdrawal of the rejections, with allowance of pending claims 1 and 3 to 10, is respectfully requested.

No fees are due. Notwithstanding, should it be deemed that fees, or deficiencies in fees, are required in connection with this or any accompanying communication, such amounts may be charged to the Attorney's Deposit Account No. 07-2519.

Respectfully submitted,



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